MEMORANDUM
To: Ana Matosantos, Cabinet Secretary for Governor Gavin Newsom
From: Steven Weissman, Lecturer at UC Berkeley's Goldman School of Public Policy
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The Massive Cost of the "New Normal" in Wildfires & Climate Change Era

As California policy makers deliberate on the most constructive approach to wildfire policy, it is important to understand potential costs associated with the new normal of increased wildfire risk and climate change. Without fundamental changes to law or industry structure, and assuming future wildfires follow the pattern of losses experienced over the last two years we can expect the following results:

1. Rates would skyrocket, on average by 50% in the first year, to keep up with new fires

It's simple math – in the last 2 years, California fires caused more than $36 billion in damages. Those kinds of wildfire losses are unsustainable for utility customers. PG&E is a prime example. The utility estimates $30 billion in damages for 2017 and 2018 fires. But the operating revenue of their electricity business is less than $13 billion a year. While one-time losses can be spread over years by borrowing money, that strategy does not work if the losses recur every year. If future fires continue to create liabilities similar to those over the last two years and PG&E can't cover the new losses by selling bonds, rates would have to double in the first year and continue to continue to grow at an unsustainable rate year after year.

But it's not just PG&E customers who would see massive increases under the current system. Ratings agencies have downgraded two other major Southern California utilities, which already puts upward pressure on rates. A major wildfire could trigger further downgrades to junk bond status. Given the importance of a utility accessing debt markets, such downgrades could drive another utility into bankruptcy. If wildfires persist at the levels we have experienced recently, and all customers of the major electric utilities had to bear the burden, average rates throughout California would have to increase by 50 percent in the first year, alone.

2. Accelerated adoption of electric vehicles would be threatened as the cost per mile for electricity in California exceeds the cost of gasoline.

California's success in promoting the deployment of electric vehicles is an important component of the state's plan to meet its ambitious climate goals. Costs of electric vehicles are decreasing as the market grows, and switching from gasoline to electricity can provide costs savings. Dramatically higher electric rates, however, could create a significant challenge as we try to maintain progress in electrifying the state's transportation sector.

3. Electrification of energy use in buildings would sputter, jeopardizing our ability to reduce greenhouse gas emissions.

Moving to the use of electric heat pump technology for water and space heating in new and existing buildings promises significant greenhouse gas reductions compared to the continued use of natural gas. Momentum is growing as new electric equipment and appliances become more affordable and offer significant performance benefits for consumers. This momentum could be lost if month-to-month energy bill savings are reduced. Dramatically higher electric bills would make the building electrification transition harder, sacrificing greenhouse gas emissions reductions and accompanying consumer benefits.

4. Higher energy costs would place California businesses at a disadvantage when competing with out-of-state businesses.

California businesses already face significant challenges because of the high cost of living and the inflated value of real estate. With dramatically higher energy bills, the challenges for energy-intensive enterprises will only grow. That means some businesses could shutter or move out of state, resulting in job losses. In addition, Silicon Valley and Silicon Beach need power for headquarter operations, call centers and server farms. If California cannot offer reliable and affordable power, we risk losing our innovation economy to other states.

5. Service reliability would suffer, as forced outages during fire season increase and discretionary expenditures on equipment upgrades decrease.

Regardless of what happens to electricity bills, service reliability will change as electric utilities use forced outages to reduce the risk of sparking fire when the weather is hot and dry, and winds are high. At the same time, as utilities push to make their systems safer and customers protest higher rates, the utilities will face pressure to cut costs somewhere. Ultimately, this could include skimping on some kinds of equipment upgrades and preventive services in a manner that could lead to a higher frequency or duration of outages.

6. Borrowing as much money as would be needed to pay for repeated multi-billion dollar wildfires is not a sustainable business practice.

The *rate base* for a regulated utility represents the undepreciated capital investment the company has made in facilities and durable equipment. It is understood that a financially healthy utility will fund its investments through a combination of equity (selling shares of stock) and debt (selling bonds). Debt is attractive because interest rates are usually low enough to make debt less expensive than equity. For that reason, a company likes to pay for some portion of its capital improvements with debt. However, if the company is overly dependent on debt (highly leveraged) then investors consider the company too risky and its credit rating will fall. When this occurs, selling bonds becomes more expensive – higher risk demands higher return. The general expectation is that a regulated utility will maintain a relatively balanced debt-to-equity ratio.

PG&E reports that its combined gas and electric *rate base* for 2020 will be slightly more than $30 billion, counting both debt and equity. For many years, the company's debt-to-equity ratio was an acceptable 1/1. At the end of 2018, as it approached bankruptcy, the company secured a large amount of new debt and its ratio became 1.7/1. From an investment perspective, its

funding is already distorted. If the company repeatedly borrowed money to pay for wildfire liabilities, its wildfire debt could quickly exceed the company's entire *rate base*. Investors would see this as a bright red flag and would likely spend their money elsewhere. To some extent, the company can evade this problem through legislatively-approved "dedicated rates", producing revenue that can only be used to pay for the bonds. But it can stretch this option only so far. Continuing to borrow large sums of money for this purpose is not sustainable.